

REMARKS

I. Status of Claims

Claims 7-12 are currently pending in this application. Claims 7 and 11 are independent. Claims 7 and 11 have been amended.

II. Pending Claims

A. Claim Objections

Claims 7 and 11 have been objected to by the Examiner. Applicant has amended the claims, and requests that the Examiner withdraw the objection.

B. Claims 7, 8, 11 and 12

Claims 7, 8, 11 and 12 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Admitted Prior Art and Yilmaz et al., (USP 5,304,831).

The amended claim 7, in combination with other features, recites a contact electrode provided outside of the semiconductor substrate conducting with the emitter region, and a corner portion of contacting portion of the emitter region to the contact electrode is formed with a curved line or with an obtuse angle. The Office admits that the alleged prior art does not show a corner of an end portion of the contacting portion as recited in claim 7.

The Office Action cites U.S. Patent No. 5,304,831 to Yilmaz et al., as disclosing this feature. In particular, the Office Action cites column 4, lines 12-40, as disclosing the claimed feature. However, a review of the citations to Yilmaz and the additional disclosure at column 3 of Yilmaz reveals that the applied prior art does not disclose the claimed feature.

Yilmaz is concerned with the diffusion of dopant as it diffuses horizontally with respect to its vertical diffusion. As described at column 3, lines 45-58, the diffusion in corner regions is much less than the diffusion along the linear regions. Although Figures 5 and 6 of Yilmaz appear to disclose the claimed features, the Figures illustrate the doping of the semiconductor device, and not the contact portion. Yilmaz does not disclose or suggest a contact region shaped as recited in the claims. Furthermore, it

does not appear to be obvious or a common sense alteration to construct a contacting region as recited in the claims based on a need to have a more uniformed diffusion of dopant as described in Yilmaz.

For the above reasons, claim 7 defines over the applied prior art. Neither the alleged Admitted Prior Art nor Yilmaz, either in isolation or in combination, disclose or suggest all of the features recited in claim 7. Claim 8 depends from claim 7, and also define the applied prior art. Accordingly, the rejection of claims 7 and 8 should be withdrawn.

Claim 11 recites, in combination with other features, an impurity concentration within the contacting that is lower at a corner portion of the contacting portion than in other portions of the contacting portion. However, the cited text, which is the same as the above text cited with respect to claim 7, merely describes the depths of the channel, and not the impurities concentration at the corner portions in comparison to the other portions of the contacting region.

Accordingly, Yilmaz and the alleged Admitted Prior Art, either individually or in combination, does not disclose or suggest the above feature of claim 11. Claim 11 is allowable, and Applicant requests withdrawal of the rejections of claim 11 and claim 12, which depends from claim 11.

C. Claims 9 and 10

Claims 9 and 10 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over the alleged Admitted Prior Art and Yilmaz et al., as applied to Claim 7 above, and further in view of Kunori et al., (USP 6,459,128).

The Office admits that Yilmaz or the alleged Admitted Prior Art does not disclose or suggest a contacting region broader at the end portions than a central portion.

The Office cites Kunori, in particular, column 2, lines 48-50 as allegedly disclosing this feature. The cited text does not disclose such a contacting region. The citation to Figures 31 and 32, node 81 and branch 82, does not disclose that branch 82 is a contact region, but merely a current path (see columns 13 and 14 of Kunori).

Furthermore, Kunori does not overcome the above described deficiencies of

Yilmaz and the alleged Admitted Prior Art with respect to independent claim 1 from which claims 9 and 10 depend. Accordingly, claims 9 and 10 define over the applied art, and the rejection of the claims should be withdrawn


III. Conclusion

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. 1.16 or 1.17 to Kenyon & Kenyon Deposit Account No. 11-0600. The Examiner is invited to contact the undersigned at (202) 220-4254 to discuss any matter concerning this application.

Respectfully submitted,

Date: March 21, 2008



Martin E. Miller
Registration No. 56,022

KENYON & KENYON LLP
1500 K Street, N.W., Suite 700
Washington, D.C. 20005
Telephone: (202) 220-4200
Facsimile: (202) 220-4201